

AbstractA Gate Arrangement

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The gate arrangement 11 is provided in order to regulate coolant airflow in a path typically in a turbine blade 1 of a jet engine. The gate arrangement 11 includes a gate component 12 having an opening end 15 which at low temperature is closed by a gate member 14. Due to different coefficients of expansion between the gate component 12 and the gate member 14 when the arrangement 11 increases in temperature there is a divergence between a seal end 21 of the gate member 14 in order to open the opening end 15 of the gate component 12 and to allow coolant airflow through the arrangement 11. Thus, coolant airflow is allowed for high temperatures but as the gate component 12 and gate member 14 converge at sustained typically lower temperatures coolant airflow is stopped in order to prevent unnecessary cooling and so provide greater thermal efficiency.